

APS Roadmap Scenarios: Next Step

April 30, 2012

Main features of the base scenario are:

- Dynamic Compression Sector (DCS) to locate in 35-ID: optimum location due to unique lateral space for required compression drivers.
- Displaced ASD-D diagnostic program in 35-ID to move to 30-ID: compatible with location opened by RIXS consolidation to 27-ID.
- Wide Field Imaging (WFI) in 20-ID: consistent with leaving BIO-CAT and SBC-CAT in their sectors but will displace current spectroscopy program on 20-ID.
- Displaced ASL spectroscopy programs in 20-ID to move to open sector on 25-ID.
- RIXS to locate in open sector on 27-ID: consistent with promise for early science from APS-U.
- 3D Laue microdiffraction S3DD on 34-ID cant; second cant shared between 3D nanodiffraction and current 2-ID microdiffraction (XSD mDiff).
- Bragg coherent diffraction imaging (BCDI) displaced from 34-ID-2 to 9-ID cant.
- X-ray Interface Science (XIS) in open sector 28-ID: optimum location for expansion outside the Experimental Hall.
- In Situ Nanoprobe (ISN) to new 32-ID cant: good option for needed optics.
- Soft magnetic spectroscopy (MS-S) to move to 2-ID cant: the separation of hard and soft magnetic spectroscopies is a conservative approach given the potential disturbance to electron beam orbit that can be created by both undulators (current EMVPU on 4-ID-C and future APPLE device on 4-ID-D) in the same straight section and the attendant complexity of the correction methods.
- Magnetic diffraction (MD) program in 6-ID displaced by SPX program to move to 2-ID cant.
- XSD micro fluorescence (XSD mFluor) program now at 2-ID to move to 9-ID cant.
- Liquid surface scattering (XSD LSS) program displaced from 9-ID to move to one of canted beamlines (28-ID) in XIS.

As the APS Upgrade moves towards creating a “baseline” for cost and schedule purposes, we encourage you to give feed back at the Upgrade website:

<http://aps.anl.gov/Upgrade/Forum/>